Asthma in New Hampshire

Issue Brief – February 2007

WHAT IS ASTHMA?

Asthma is a chronic lung disease that has been increasing in prevalence in the United States since 1980. Asthma involves swelling and inflammation of the airways, reversible airway obstruction, and muscle spasms around the airways in response to a variety of triggers. Anyone can get asthma, at any age. The main symptoms of asthma are cough, chest tightness, wheezing (a whistling, high-pitched noise coming from the chest) and shortness of breath. Asthma cannot be cured but it can be controlled. With proper care, people who have asthma can live normal, active lives.

HOW IS ASTHMA MANAGED AND TREATED?

Illness and death from asthma can be largely prevented with medical and environmental management according to national guidelines. Successful asthma management includes the avoidance of factors that trigger asthma symptoms (i.e. secondhand smoke, allergens, colds), routine monitoring of the disease by a physician and patient/family education. Patients with asthma should have an asthma action plan that outlines the steps to take for daily management and describes what to do when asthma worsens. The plan should be updated regularly and shared with family members, health providers, and school nurses in the case of pediatric patients.

WHAT DO WE KNOW ABOUT ASTHMA IN NEW HAMPSHIRE?

Current data on asthma appear in the recently published report, *Asthma in New Hampshire, 1990-2004*. This Issue Brief summarizes some of the main findings of that report.

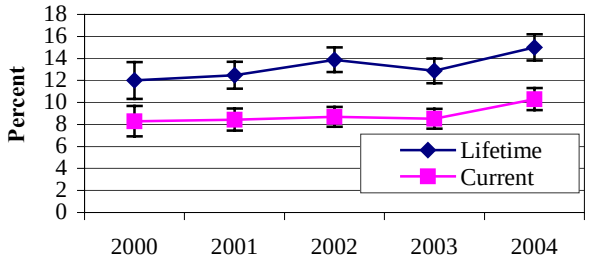
It should be remembered that regardless of the prevalence of asthma, most emergency department and hospital visits are preventable when asthma is managed according to established guidelines.

Prevalence

According to the 2004 Behavioral Risk Factor Survey data, 15.0% of adults in New Hampshire were told they had asthma at some time in their life and 10.3% of adults reported that they currently have asthma.

The prevalence of lifetime and current asthma among adults in New Hampshire has been increasing since the year 2000 (Figure 1). Nationally, the prevalence of asthma has been increasing over the last two decades. State level asthma estimates became available starting in 2000.

Figure 1
Prevalence of lifetime and current asthma among adults, by survey year - New Hampshire, 2000-2004



Source: Behavioral Risk Factor Survey, 2000-2004

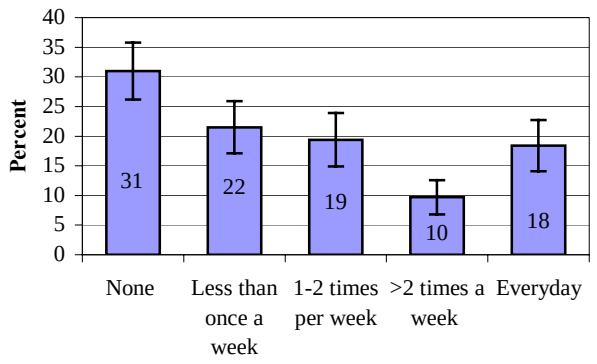
The prevalence of current asthma is significantly higher among adult women (12.2%) than among adult men (8.3%) in New Hampshire.

The 2003 National Survey of Children's Health estimates that approximately 7.9% of New Hampshire's children had current asthma in 2003.

Asthma Control and Management

People with asthma should experience minimal or no chronic symptoms when their condition is managed according to established guidelines. In 2004 only 31% of New Hampshire adults with current asthma said they were symptom-free in the previous 30 days. Almost half of adults with asthma reported they experienced symptoms at least once a week (Figure 2).

Figure 2
Symptoms in past 30 days among adults with current asthma - New Hampshire, 2004

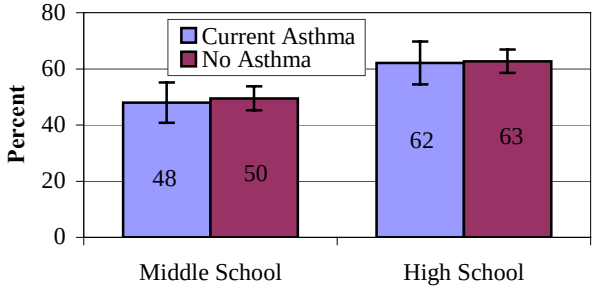


Source: Behavioral Risk Factor Survey, 2004

Approximately 52% of adults with asthma said they had at least one asthma attack in the past year, and 25% said there were days when they were unable to work or carry out their usual activities due to asthma.

Secondhand smoke is a known asthma trigger for many people with asthma. Middle and high school students who have asthma are as likely to be exposed to secondhand smoke as their peers (Figure 3).

Figure 3
Percent of students who reported being exposed to secondhand cigarette smoke within the last 7 days, by asthma status - New Hampshire, 2004



Source: NH Youth Tobacco Survey, 2004

Emergency Department Visits

There were 5,498 asthma-related emergency department visits in New Hampshire in 2004, a rate of 42.3 visits per 10,000 residents. These emergency department visits resulted in approximately 3.9 million dollars in total charges. Women, children less than 5 years old, and individuals aged 15-34 had the highest rates of asthma-related emergency department visits in New Hampshire.

The rate of emergency department visits for asthma has declined since 2001. The 0-4 and 5-64 age groups are currently below the *US Healthy People 2010* goal, but the 65 and older age group is higher than the 2010 target (Table 1).

Table 1
Comparison of New Hampshire emergency department rates* and *US Healthy People 2010* objectives, by age group

Age Group	2001 NH Rate	2004 NH Rate	US Healthy People 2010 Target
0 to 4	67.0	64.3	80
5 to 64	51.3	44.5	50
≥ 65	20.8	17.2	15

*Rates are per 10,000 residents.
Source: New Hampshire Outpatient Hospital Discharge Data

Hospitalizations

In 2004, there were 940 asthma-related hospitalizations of New Hampshire residents, resulting in 3,317 days spent in the hospital and total charges of approximately $8.2 million - almost double the amount spent in 2000. The hospitalization rate for asthma in 2004 was 7.2 per 10,000 residents. Women, children less than 5 years old, and adults 65 and older had the highest rates of hospitalization for asthma in the State.

Hospitalization rates overall have increased since the year 2000. Still the rates for 0 to 4 and 5 to 64 year olds remain below *US Healthy People 2010* target goals. Rates for those 65 years and older, initially below the *US Healthy People 2010* target in 2001, surpassed it in 2004 (Table 2).

Table 2
Comparison of New Hampshire inpatient hospitalization rates* and US and NH 2010 objectives, by age group

Age Group	2001 NH Rate	2004 NH Rate	US Healthy People 2010 Target
0 to 4	12.8	14.7	25
5 to 64	4.9	6.0	7.7
≥ 65	9.7	12.1	11
			Healthy NH
0 to 17	8.8	9.3	7.9

*Rates are per 10,000 residents
Source: New Hampshire Inpatient Hospital Discharge Data

Mortality

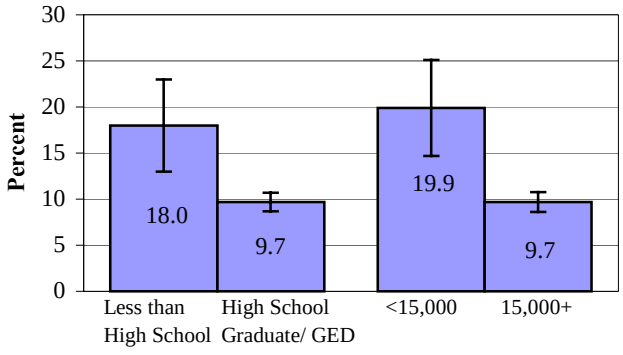
Deaths due to asthma are relatively uncommon, especially among young people. Over the period 1990-2002, there were a total of 222 asthma-related deaths among New Hampshire residents. Approximately 67% of all asthma deaths were among women and 61% were among adults aged 65 and older. In 2002, there were 16 deaths in New Hampshire due to asthma.

WHICH POPULATIONS ARE MOST VULNERABLE?

As in other states, asthma is most prevalent among male children and adult females, and females have the highest rates of hospitalization, emergency department use and mortality. Of the different age groups, children 0-4 years old and adults 65 and older have the highest rates of hospitalization for asthma, while children 0-4 and adults 15-34 years old have the highest rates of emergency department use. Clearly, clinical and public health interventions need to focus on understanding how and why women and the age groups listed above are adversely affected and how to improve their health outcomes.

The prevalence of current asthma among adults varies by socioeconomic factors. Adults with less than a high school level of education and adults who report an annual household income below $15,000 report current asthma more often (Figure 4).

Figure 4
Prevalence of current asthma among adults, by education and income level - New Hampshire, 2004



Source: Behavior Risk Factor Survey, 2004

The prevalence of asthma also varies by race/ethnicity. In the United States, adults who are neither white nor Hispanic report having current asthma more often. In New Hampshire, it is difficult to measure the prevalence of asthma by race/ethnicity due to the relatively small minority population in the State. Only 4% of New Hampshire's population is racially diverse as compared with 25% of the US population.

WHAT STEPS SHOULD ALL ASTHMA PATIENTS TAKE TO HELP CONTROL THEIR ASTHMA?

People with asthma should follow these five steps to help control their asthma:

1. Complete an Asthma Action Plan with your doctor and follow it
2. Know your symptoms and take your medication
3. Know your asthma triggers and avoid them
4. Get a flu shot
5. Avoid all tobacco smoke

WHAT IS BEING DONE ABOUT ASTHMA IN NEW HAMPSHIRE?

The New Hampshire Asthma Control Program

The Centers for Disease Control and Prevention funds the New Hampshire Asthma Control Program under a cooperative agreement with the New Hampshire Department of Health and Human Services. The goals of the program are to:

- Improve health outcomes by increasing adherence to National Asthma Education and Prevention Program Guidelines
- Increase capacity to create asthma-healthy environments
- Enhance public awareness and education
- Enhance the asthma surveillance system to support program planning, monitoring and evaluation.

Statewide Activities

A majority of the New Hampshire Asthma Control Program's activities involve clinical and environmental interventions; these are informed and developed using information from the asthma surveillance system.

Improving Health Outcomes: The Asthma Program supports a variety of professional development and education activities to improve the health of people with asthma:

- The ***Asthma Educator Institute***, a program conducted by the American Lung Association of New Hampshire, prepares clinicians to take the national certification exam for asthma educators
- ***Asthma Training Series I & II*** bring continuing medical education sessions to community health centers, private practices and hospitals
- **The *Asthma Learning Collaborative*** works with individual medical practices to improve their management of asthma and patient health

Promoting Healthy Environments: Indoor and outdoor air quality are important in the management of asthma because environmental "triggers" such as dust mites, secondhand smoke, mold and diesel emissions can make asthma worse. The Asthma Program works with multiple organizations to create asthma healthy environments in homes and schools.

Asthma Healthy Homes: Educating property owners, families, housing and public health professionals on building and maintenance practices for asthma-healthy homes. Some examples:

- The Way Home ***Healthy Homes Services Peer Education Project***
- Manchester Health Department ***Community-based Asthma Education and Outreach***
- NH Housing ***Essentials of Healthy Housing Workshop*** for housing and public health professionals

Asthma Healthy Schools: Building and maintaining healthy school environments. Some examples:

- Department of Education ***Mold Awareness Workshops*** and ***High Performance School Initiatives*** to design and build schools that maximize student performance
- The Jordan Institute ***NH Partnership for High Performance Schools*** and ***Cleaning for Health: "Green" Cleaning Practices for Schools***
- The American Lung Association of New Hampshire ***Counting on You***, education for child care providers, and ***Open Airways***, education for kids and school personnel
- NH Department of Environmental Services ***Clean School Bus Initiative*** to reduce diesel emissions and ***Healthy SEAT***, educating school building personnel on the EPA School Environment Assessment Tool

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WHERE CAN I GET MORE INFORMATION?

For more information on the data presented here or to receive a copy of *Asthma in New Hampshire, 1990-2004*, contact the New Hampshire Asthma Control Program at (800) 852-3345 ext. 0856.

Other Resources

- Visit **www.AsthmaNow.net**, New Hampshire's website for asthma. There are sections on asthma care and management, asthma and the environment, asthma and schools, asthma and the home, as well as resources to help parents, children, teens, and providers. Use the AsthmaNow.net website to link to other helpful web pages and sites.
- Take advantage of a variety of educational and advocacy services provided by the **American Lung Association of New Hampshire**. Contact them at: **1-800-835-8647** or go to **www.nhlung.org.**
- Contact the **New Hampshire Lung Health Call Center** at **1-800-548-8252** for information on asthma and other respiratory diseases. The call center also provides personalized smoking cessation counseling.
- For a copy of the *Guidelines for the Diagnosis and Management of Asthma* visit the National Heart, Lung, and Blood Institute website at **www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm**.
- Contact the **Department of Environmental Services** at **603-271-3911** for information on how to monitor and improve indoor air quality including how to deal with mold problems.
- Go to the **Centers for Disease Control and Prevention** asthma website at **www.cdc.gov/asthma** for data and information on how asthma is being addressed nationwide.